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## Nitrogen News

**January 2010**

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*Nitrogen News is a summary of recent publications, news and reports related to the cycling, effects and management of nitrogen. Prepared by Mary O'Brien and Jana Compton. Contact Jana Compton with any questions (Compton.jana@epa.gov)*

*Please note: Most of these links are available to EPA staff through library access – not all links will be available to folks outside EPA, depending on your access to specific journals and websites.*

### **Issue 8, January 2010**

#### **News**

##### **Worldwide nitrogen deficit constrains carbon dioxide uptake by plants**

*Science Daily*, January 23, 2010

<http://www.sciencedaily.com/releases/2010/01/100121164209.htm>

##### **EPA proposes standards to protect Florida's waters: Action would decrease amount of phosphorus and nitrogen pollution**

U.S. Environmental Protection Agency, January 15, 2010

<http://yosemite.epa.gov/opa/admpress.nsf/6427a6b7538955c585257359003f0230/393728cbe28ce582852576ac00515a61!OpenDocument>

##### **Iron controls patterns of nitrogen fixation in the Atlantic**

*ScienceDaily*, January 7, 2010

<http://www.sciencedaily.com/releases/2009/11/091102121628.htm>

##### **Melting tundra creating vast river of waste into Arctic Ocean**

University of Gothenburg, The Faculty of Science, *News*, December 21, 2009

[http://www.science.gu.se/english/News/News\\_detail/Melting\\_tundra\\_creating\\_vast\\_river\\_of\\_waste\\_into\\_Arctic\\_Ocean.cid911050](http://www.science.gu.se/english/News/News_detail/Melting_tundra_creating_vast_river_of_waste_into_Arctic_Ocean.cid911050)

#### **For BNA subscribers (including EPA staff)**

##### **EPA proposal on nutrients in Florida waters could set trend with other states targeted**

*Daily Environment Report, Special Report*, January 27, 2010

[http://news.bna.com/deln/DELNWB/split\\_display.adp?fedfid=16092704&vname=dennotallissue&wsn=497201500&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=0](http://news.bna.com/deln/DELNWB/split_display.adp?fedfid=16092704&vname=dennotallissue&wsn=497201500&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=0)

##### **EPA publishes proposed limits for nutrients to protect Florida waters**

*Daily Environment Report, News*, January 26, 2010

[http://news.bna.com/deln/DELNWB/split\\_display.adp?fedfid=16086998&vname=dennotallissue&wsn=497231000&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1](http://news.bna.com/deln/DELNWB/split_display.adp?fedfid=16086998&vname=dennotallissue&wsn=497231000&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1)

**Stormwater, nutrients, wetlands jurisdiction seen as leading clean water issues for 2010**

*Daily Environment Report, Outlook*, January 20, 2010

[http://news.bna.com/deln/DELNWB/split\\_display.adp?fedfid=16043595&vname=dennotallissue&wsn=497364500&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1](http://news.bna.com/deln/DELNWB/split_display.adp?fedfid=16043595&vname=dennotallissue&wsn=497364500&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1)

**EPA proposes numeric nutrient limits for lakes, rivers, streams in Florida**

*Daily Environment Report, News*, January 19, 2010

[http://news.bna.com/deln/DELNWB/split\\_display.adp?fedfid=16026786&vname=dennotallissue&wsn=497394000&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1](http://news.bna.com/deln/DELNWB/split_display.adp?fedfid=16026786&vname=dennotallissue&wsn=497394000&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1)

**Jackson says Agency may need additional authority to guide Bay restoration efforts**

*Daily Environment Report, News*, January 16, 2010

[http://news.bna.com/deln/DELNWB/split\\_display.adp?fedfid=15885576&vname=dennotallissue&wsn=497625500&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1](http://news.bna.com/deln/DELNWB/split_display.adp?fedfid=15885576&vname=dennotallissue&wsn=497625500&searchid=10354856&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1)

**For Inside EPA subscribers (including EPA staff)**

**EPA issues new ammonia water quality criteria**

*InsideEPA.com Documents*, January 29, 2010

[http://insideepa.com/secure/data\\_extra/dir\\_10/epa2010\\_0177.pdf](http://insideepa.com/secure/data_extra/dir_10/epa2010_0177.pdf)

**EPA launches new rulemaking to strengthen water quality standards**

*InsideEPA.com Daily News*, January 27, 2010

[http://insideepa.com/secure/docnum.asp?docnum=1272010\\_launches&f=epa\\_2001.ask](http://insideepa.com/secure/docnum.asp?docnum=1272010_launches&f=epa_2001.ask)

**EPA plans new measures to strengthen CAFO discharge regulations**

*Environmental Policy Alert*, January 27, 2010

[http://insideepa.com/secure/docnum.asp?docnum=POLICYALERT-27-2-21&f=epa\\_2001.ask](http://insideepa.com/secure/docnum.asp?docnum=POLICYALERT-27-2-21&f=epa_2001.ask)

**EPA issues final first-time one-hour NO<sub>2</sub> ambient air quality standard**

*InsideEPA.com Documents*, January 25, 2010

[http://insideepa.com/secure/docnum.asp?docnum=epa2010\\_0134&f=epa\\_2001.ask](http://insideepa.com/secure/docnum.asp?docnum=epa2010_0134&f=epa_2001.ask)

**Novel EPA ozone standard shows greater agency focus on ecological risk**

*Clean Air Report*, January 21, 2010

[http://insideepa.com/secure/docnum.asp?docnum=CLEANAIR-21-2-10&f=epa\\_2001.ask](http://insideepa.com/secure/docnum.asp?docnum=CLEANAIR-21-2-10&f=epa_2001.ask)

**EPA provides key flexibility in landmark Florida numeric nutrient limit**

*InsideEPA.com Daily News*, January 15, 2010

[http://insideepa.com/secure/docnum.asp?docnum=1152010\\_numeric&f=epa\\_2001.ask](http://insideepa.com/secure/docnum.asp?docnum=1152010_numeric&f=epa_2001.ask)

**Task force eyes new measures of Mississippi River nutrient reductions**

*InsideEPA.com Daily News*, January 4, 2010

[http://insideepa.com/secure/docnum.asp?docnum=142010\\_taskforce&f=epa\\_2001.ask](http://insideepa.com/secure/docnum.asp?docnum=142010_taskforce&f=epa_2001.ask)

**Key think tank downplays need for research in fighting nutrient pollution**

*Water Policy Report*, January 4, 2010

[http://insideepa.com/secure/docnum.asp?docnum=WATER-19-1-25&f=epa\\_2001.ask](http://insideepa.com/secure/docnum.asp?docnum=WATER-19-1-25&f=epa_2001.ask)

**Articles**

Amoroso, A., F. Domine, G. Esposito, S. Morin, J. Savarino, M. Nardino, M. Montagnoli, J. M. Bonneville, J. C. Clement, A. Ianniello, and H. J. Beine.

**Microorganisms in dry polar snow are involved in the exchanges of reactive nitrogen species with the atmosphere**

*Environmental Science & Technology*, 44(2): 714-719, 2010. ISSN 0013-936X.

<http://dx.doi.org/10.1021/es9027309>

Arce, M. I., R. Gomez, M.D. Vidal-Abarca, and M. L. Suarez.

**Effects of Phragmites australis growth on nitrogen retention in a temporal stream**

*Limnetica*, 28(2): 229-241, 2009. ISSN 0213-8409.

[http://www.limnetica.com/Limnetica/limne28b/L28b229\\_effect\\_Phragmites\\_nitrogen\\_retention.pdf](http://www.limnetica.com/Limnetica/limne28b/L28b229_effect_Phragmites_nitrogen_retention.pdf)

Borderelle, A.L., D. Gerdeaux, P. Giraudoux, and V. Verneaux.

**Influence of watershed's anthropogenic activities on fish nitrogen and carbon stable isotope ratios in nine French lakes**

*Knowledge and Management Of Aquatic Ecosystems*, 392(1):1-13, 2009. ISSN 1961-9502.

<http://dx.doi.org/10.1051/kmae/2009003>

Bouwman, A. F., A. H. W. Beusen, and G. Billen.

**Human alteration of the global nitrogen and phosphorus soil balances for the period 1970-2050**

*Global Biogeochemical Cycles*, 23, GB0A04, 2009. ISSN 0886-6236.

doi: 10.1029/2009GB003576

<http://www.agu.org/journals/gb/gb0904/2009GB003576/2009GB003576.pdf>

Cathey, S. E., L. R. Boring, and T. R. Sinclair.

**Assessment of N-2 fixation capability of native legumes from the longleaf pine-wiregrass ecosystem**

*Environmental and Experimental Botany*, 67(3): 444-450, 2010. ISSN 0098-8472.

<http://dx.doi.org/10.1016/j.envexpbot.2009.09.006>

Condon, R.H., D.K. Steinberg, D.A. Bronk.

**Production of dissolved organic matter and inorganic nutrients by gelatinous zooplankton in the York River estuary, Chesapeake Bay**

*Journal of Plankton Research*, 32(2): 153-170, 2010. ISSN 0142-7873.

<http://dx.doi.org/10.1093/plankt/fbp109>

Conrad, Y., and N. Fohrer.

**A test of CoupModel for assessing the nitrogen leaching in grassland systems with two different fertilization levels**

*Journal of Plant Nutrition and Soil Science-Zeitschrift fur Pflanzernahrung und Bodenkunde*, 172(6): 745-756, 2009. ISSN 1436-8730.

<http://dx.doi.org/10.1002/jpln.200800264>

Cox, T. J. S., and T. Maris, K. Soetaert, D. J. Conley, S. Van Damme, P. Meire, J. J. Middelburg, M. Vos, and E. Struyf.

**A macro-tidal freshwater ecosystem recovering from hypereutrophication: the Schelde case study**

*Biogeosciences*, 6(12): 2935-2948, 2009. ISSN 1726-4170.

<http://www.biogeosciences.net/6/2935/2009/bg-6-2935-2009.pdf>

Farias, L., C. Fernandez, J. Faundez, M. Cornejo, and M.E. Alcaman.

**Chemolithoautotrophic production mediating the cycling of the greenhouse gases N2O and CH4 in an upwelling ecosystem**

*Biogeosciences*, 6(12): 3053-3069, 2009. ISSN 1726-4170.

<http://www.biogeosciences.net/6/3053/2009/bg-6-3053-2009.pdf>

Feaga, J. B., J. S. Selker, R. P. Dick, and D. D. Hemphill.

**Long-term nitrate leaching under vegetable production with cover crops in the Pacific Northwest**

*Soil Science Society of America Journal*, 74(1): 186-195, 2010. ISSN 0361-5995.

<http://dx.doi.org/10.2136/sssaj2008.0178>

Fernandez, C., L. Farias, and M. E. Alcaman.

**Primary production and nitrogen regeneration processes in surface waters of the Peruvian upwelling system**

*Progress in Oceanography*, 83(1-4): 159-168, 2009. ISSN 0079-6611.

<http://dx.doi.org/10.1016/j.pocean.2009.07.010>

Ficklin, D. L., Y. Z. Luo, E. Luedeling, S. E. Gatzke, and M. H. Zhang.

**Sensitivity of agricultural runoff loads to rising levels of CO2 and climate change in the San Joaquin Valley watershed of California**

*Environmental Pollution*, 158(1): 223-234, 2010. ISSN 0269-7491.

<http://dx.doi.org/10.1016/j.envpol.2009.07.016>

Franzaring, J., I. Holz, J. Zipperle, and A. Fangmeier.

**Twenty years of biological monitoring of element concentrations in permanent forest and grassland plots in Baden-Wurttemberg (SW Germany)**

*Environmental Science and Pollution Research*, 17(1): 4-12, 2010. ISSN 0944-1344.  
<http://dx.doi.org/10.1007/s11356-009-0181-x>

Gallego, A., L. Rodriguez, A. Hospido, M. T. Moreira, and G. Feijoo.  
**Development of regional characterization factors for aquatic eutrophication**  
*International Journal of Life Cycle Assessment*, 15(1): 32-43, 2010. ISSN 0948-3349.  
<http://dx.doi.org/10.1007/s11367-009-0122-4>

Garcia-Garcia, V., R. Gomez, M. R. Vidal-Abarca, and M. L. Suarez.  
**Nitrogen retention in natural Mediterranean wetland-streams affected by agricultural runoff**  
*Hydrology and Earth System Sciences*, 13(12): 2359-2371, 2009. ISSN 1027-5606.  
<http://www.hydrol-earth-syst-sci.net/13/2359/2009/hess-13-2359-2009.pdf>

Gerber, S., L. O. Hedin, M. Oppenheimer, S.W. Pacala, and E. Shevliakova.  
**Nitrogen cycling and feedbacks in a global dynamic land model**  
*Global Biogeochemical Cycles*, 24, GB1001, 2010.  
ISSN 0886-6236.  
<http://dx.doi.org/10.1029/2008GB003336>

Gomes, J., C. Bayer, F. D. Costa, M. D. Piccolo, J. A. Zanatta, F. C. B. Vieira, and J. Six.  
**Soil nitrous oxide emissions in long-term cover crops-based rotations under subtropical climate**  
*Soil & Tillage Research*, 106(1): 36-44, 2009. ISSN 0167-1987.  
<http://dx.doi.org/10.1016/j.still.2009.10.001>

Harmel, R. D., D. R. Smith, R. L. Haney, and M. Dozier.  
**Nitrogen and phosphorus runoff from cropland and pasture fields fertilized with poultry litter**  
*Journal of Soil and Water Conservation*, 64(6): 400-412, 2009. ISSN 0022-4561.  
<http://dx.doi.org/10.2489/jswc.64.6.400>

Houlton, B. Z., and E. Bai.  
**Imprint of denitrifying bacteria on the global terrestrial biosphere**  
*Proceedings of the National Academy of Sciences of the United States of America*, 106 (51): 21713-21716, 2009. ISSN 0027-8424.  
<http://dx.doi.org/10.1073/pnas.0912111106>

Hutchins, D. A., M. R. Mulholland, and F. X. Fu.  
**Nutrient cycles and marine microbes in a CO<sub>2</sub>-enriched ocean**  
*Oceanography*, 22(4): 128-145, 2009. ISSN 1042-8275.  
[http://www.tos.org/oceanography/issues/issue\\_archive/issue\\_pdfs/22\\_4/22-4\\_hutchins.pdf](http://www.tos.org/oceanography/issues/issue_archive/issue_pdfs/22_4/22-4_hutchins.pdf)

Jain, A., X. J. Yang, H. Kheshgi, A. D. McGuire, W. Post, and D. Kicklighter.  
**Nitrogen attenuation of terrestrial carbon cycle response to global environmental factors**  
*Global Biogeochemical Cycles*, 23, GB4028, 2009. ISSN 0886-6236.

<http://dx.doi.org/10.1029/2009GB003519>

Jolley, R. L., B. G. Lockaby, and R. M. Governo.

**Biogeochemical influences associated with sedimentation in riparian forests of the southeastern coastal plain**

*Soil Science Society of America Journal*, 74(1): 326-336, 2010. ISSN 0361-5995.

<http://dx.doi.org/10.2136/sssaj2009.0041>

Junier, P., V. Molina, C. Dorador, O. Hadas, O. S. Kim, T. Junier, K. P. Witzel, and J. F. Imhoff.

**Phylogenetic and functional marker genes to study ammonia-oxidizing microorganisms (AOM) in the environment**

*Applied Microbiology and Biotechnology*, 85(3): 425-440, 2010. ISSN 0175-7598.

<http://dx.doi.org/10.1007/s00253-009-2228-9>

Koch, J. C., D. M. McKnight, and J. L. Baeseman,.

**Effect of unsteady flow on nitrate loss in an oligotrophic, glacial meltwater stream**

*Journal of Geophysical Research-Biogeosciences*, 115, G01001, 2010. ISSN 0148-0227.

<http://dx.doi.org/10.1029/2009JG001030>

Kornartit, C., R. S. Sokhi, M. A. Burton, and K. Ravindra.

**Activity pattern and personal exposure to nitrogen dioxide in indoor and outdoor microenvironments**

*Environment International*, 36(1): 36-45, 2010. ISSN 0160-4120.

<http://dx.doi.org/10.1016/j.envint.2009.09.004>

Kroll, S. A., C. N. Llacer, M. D. Cano, and J. de las Heras.

**The influence of land use on water quality and macroinvertebrate biotic indices in rivers within Castilla-La Mancha (Spain)**

*Limnetica*, 28(2): 203-214, 2009. ISSN 0213-8409.

[http://www.limnetica.com/Limnetica/limne28b/L28b203\\_water\\_quality\\_rivers\\_Mancha.pdf](http://www.limnetica.com/Limnetica/limne28b/L28b203_water_quality_rivers_Mancha.pdf)

Kuvaldina, N., I. Lips, U. Lips, and T. Liblik.

**The influence of a coastal upwelling event on chlorophyll a and nutrient dynamics in the surface layer of the Gulf of Finland, Baltic Sea**

Guest editors: T. Zohary, J. Padisák & L. Naselli-Flores / Phytoplankton in the Physical Environment: Papers from the 15th Workshop of the International Association for Phytoplankton Taxonomy and Ecology (IAP), held at the Ramot Holiday Resort on the Golan Heights, Israel, 23–30 November 2008.

*Hydrobiologia*, 639(1): 221-230, 2010. ISSN 0018-8158.

<http://dx.doi.org/10.1007/s10750-009-0022-4>

Lam, Q. D., B. Schmalz, and N. Fohrer.

**Modelling point and diffuse source pollution of nitrate in a rural lowland catchment using the SWAT model**

*Agricultural Water Management*, 97(2): 317-325, 2010. ISSN 0378-3774.

<http://dx.doi.org/10.1016/j.agwat.2009.10.004>

Liu, G. L., D. L. Tang, S. F. Wang, and L. Nguyen-Ngoc.  
**Variations in the dominant algal bloom-forming species in the western South China Sea from 1993 to 2007**  
*African Journal of Marine Science*, 31(3): 373-380, 2009. ISSN 1814-232X.  
<http://dx.doi.org/10.2989/AJMS.2009.31.3.10.998>

Liu, X. J., Z. M. Yu, X. X. Song, and X. H. Cao.  
**The nitrogen isotopic composition of dissolved nitrate in the Yangtze River (Changjiang) estuary, China**  
*Estuarine Coastal and Shelf Science*, 85(4): 641-650, 2009. ISSN 0272-7714.  
<http://dx.doi.org/10.1016/j.ecss.2009.09.017>

Lloret, J., and A. Marin.  
**The role of benthic macrophytes and their associated macroinvertebrate community in coastal lagoon resistance to eutrophication**  
*Marine Pollution Bulletin*, 58(12): 1827-1834, 2009. ISSN 0025-326X.  
<http://dx.doi.org/10.1016/j.marpolbul.2009.08.001>

MacNeil, C., M. Briffa, R. S. E. W. Leuven, F. R. Gell, and R. Selman  
**An appraisal of a biocontamination assessment method for freshwater macroinvertebrate assemblages; a practical way to measure a significant biological pressure?**  
*Hydrobiologia*, 638(1): 151-159, 2010. ISSN 0018-8158.  
<http://dx.doi.org/10.1007/s10750-009-0037-x>

Messie, M., J. Ledesma, D. D. Kolber, R. P. Michisaki, D. G. Foley, and F. P. Chavez.  
**Potential new production estimates in four eastern boundary upwelling ecosystems**  
*Progress in Oceanography*, 83(1-4): 151-158, 2009. ISSN 0079-6611.  
<http://dx.doi.org/10.1016/j.pocean.2009.07.018>

Miller, D. E., and S. A. Watmough.  
**Air pollution, climate, soil acidity, and indicators of forest health in Ontario's sugar maple forests**  
*Canadian Journal of Forest Research-Revue Canadienne de Recherche Forestiere*, 39(11): 2065-2079, 2009. ISSN 0045-5067.  
<http://dx.doi.org/10.1139/X09-124>

Moore, M.T., R. Kroger, M. A. Locke, R. F. Cullum, R. W. Steinriede, S. Testa, R. E. Lizotte, C. T. Bryant, and C. M. Cooper.  
**Nutrient mitigation capacity in Mississippi Delta, USA drainage ditches**  
*Environmental Pollution*, 158(1): 175-184, 2010. ISSN 0269-7491.  
<http://dx.doi.org/10.1016/j.envpol.2009.07.024>

Munoz, R., and F. X. Niell.  
**Nitrogen and phosphorus uptake by *Sarcocornia perennis* (Miller) A. J. Scott, at natural concentrations in the Palmones river estuary**

*Limnetica*, 28(2): 215-223, 2009. ISSN 0213-8409.  
[http://www.limnetica.com/Limnetica/limne28b/L28b215\\_incorporacion\\_nutrientes\\_Sarcocornia.pdf](http://www.limnetica.com/Limnetica/limne28b/L28b215_incorporacion_nutrientes_Sarcocornia.pdf)

Ozkan, K., E. Jeppesen, L. S. Johansson, and M. Beklioglu.  
**The response of periphyton and submerged macrophytes to nitrogen and phosphorus loading in shallow warm lakes: a mesocosm experiment**  
*Freshwater Biology*, 55(2): 463-475, 2010. ISSN 0046-5070.  
<http://dx.doi.org/10.1111/j.1365-2427.2009.02297.x>

Pan, Y. D., R. Birdsey, J. Hom, and K. McCullough.  
**Separating effects of changes in atmospheric composition, climate and land-use on carbon sequestration of US Mid-Atlantic temperate forests**  
*Forest Ecology and Management*, 259(2): 151-164, 2009. ISSN 0378-1127.  
<http://dx.doi.org/10.1016/j.foreco.2009.09.049>

Pant, H. K.  
**A preliminary study on estimating extra-cellular nitrate reductase activities in estuarine systems**  
*Knowledge and Management of Aquatic Ecosystems*, 392, 2009. ISSN 1961-9502.  
<http://dx.doi.org/10.1051/kmae/2009011>

Parker, B. R., D. W. Schindler, K. G. Beaty, M. P. Stainton, and S. E. M. Kasian.  
**Long-term changes in climate, streamflow, and nutrient budgets for first-order catchments at the Experimental Lakes Area (Ontario, Canada)**  
*Canadian Journal of Fisheries and Aquatic Sciences*, 66(11): 1848-1863, 2009. ISSN 0706-652X.  
<http://dx.doi.org/10.1139/F09-149>

Pasquini, S. C., and G. L. Vourlitis.  
**Post-fire primary production and plant community dynamics in chaparral stands exposed to varying levels of nitrogen deposition**  
*Journal of Arid Environments*, 74(2): 310-314, 2010. ISSN 0140-1963.  
<http://dx.doi.org/10.1016/j.jaridenv.2009.08.013>

Pelster, D. E., R. K. Kolka, and E. E. Prepas.  
**Overstory vegetation influence nitrogen and dissolved organic carbon flux from the atmosphere to the forest floor: Boreal Plain, Canada**  
*Forest Ecology and Management*, 259(2): 210-219, 2009. ISSN 0378-1127.  
<http://dx.doi.org/10.1016/j.foreco.2009.10.017>

Peternel-Staggs, K., L. Saito, and C. H. Fritsen.  
**Evaluation of a modeling approach to assess nitrogen assimilative capacity due to river restoration (vol 134, pg 474, 2008)**  
*Journal of Water Resources Planning and Management-ASCE*, 136(1): 142, 2010. ISSN 0733-9496.

[http://dx.doi.org/10.1061/\(ASCE\)0733-9496\(2008\)134:5\(474\)](http://dx.doi.org/10.1061/(ASCE)0733-9496(2008)134:5(474))

Pilegaard, K., J. K. Schjoerring, and M. A. Sutton.

**Preface 'Processes controlling the exchange of ammonia between grassland and the atmosphere (GRAMINAE) - results from the Braunschweig field experiment'**

*Biogeosciences*, 6(12): 3149-3150, 2009. ISSN 1726-4170.

<http://www.biogeosciences.net/6/3149/2009/bg-6-3149-2009.pdf>

Rivest, D., A. Cogliastro, and A. Olivier.

**Tree-based intercropping systems increase growth and nutrient status of hybrid poplar: A case study from two Northeastern American experiments**

*Journal of Environmental Management*, 91(2): 432-440, 2009. ISSN 0301-4797.

<http://dx.doi.org/10.1016/j.jenvman.2009.09.013>

Senga, Y., M. Okumura, and Y. Seike.

**Seasonal and Spatial Variation in the Denitrifying Activity in Estuarine and Lagoonal Sediments**

*Journal of Oceanography*, 66(1): 155-160, 2010. ISSN 0916-8370.

<http://www.springerlink.com/content/n2516h2w83172h10/fulltext.pdf>

Sleutel, S., J. Vandenbruwane, A. De Schrijver, K. Wuyts, B. Moeskops, K. Verheyen, and S. De Neve.

**Patterns of dissolved organic carbon and nitrogen fluxes in deciduous and coniferous forests under historic high nitrogen deposition**

*Biogeosciences*, 6(12): 2743-2758, 2009. ISSN 1726-4170.

<http://www.biogeosciences.net/6/2743/2009/bg-6-2743-2009.pdf>

Sutton, M. A., E. Nemitz, C. Milford, C. Campbell, J. W. Erisman, A. Hensen, P. Cellier, M. David, B. Loubet, E. Personne, J. K. Schjoerring, M. Mattsson, J. R. Dorsey, M. W. Gallagher, L. Horvath, T. Weidinger, R. Meszaros, U. Dammgen, A. Neftel, B. Herrmann, B. E. Lehman, C. Flechard, and J. Burkhardt,.

**Dynamics of ammonia exchange with cut grassland: synthesis of results and conclusions of the GRAMINAE Integrated Experiment**

*Biogeosciences*, 6(12): 2907-2934, 2009. ISSN 1726-4170.

<http://www.biogeosciences.net/6/2907/2009/bg-6-2907-2009.pdf>

Wang, Y.-P., and B. Z. Houlton.

**Nitrogen constraints on terrestrial carbon uptake: Implications for the global carbon-climate feedback**

*Geophysical Research Letters*, 36, L24403, 2009. ISSN 0094-8276.

doi:10.1029/2009GL041009

<http://www.agu.org/pubs/crossref/2009/2009GL041009.shtml>

Weisner, S. E. B., and G. Thiere.

**Effects of vegetation state on biodiversity and nitrogen retention in created wetlands: a test of the biodiversity-ecosystem functioning hypothesis**

*Freshwater Biology*, 55(2): 387-396, 2010. ISSN 0046-5070.  
<http://dx.doi.org/10.1111/j.1365-2427.2009.02288.x>

Wigand, C., R. McKinney, M. Chintala, S. Lussier, and J. Heltshe.  
**Development of a reference coastal wetland set in Southern New England (USA)**  
*Environmental Monitoring and Assessment*, 161(1-4): 583-598, 2010. ISSN 0167-6369.  
<http://dx.doi.org/10.1007/s10661-009-0770-7>

Wigand, C., P. Brennan, M. Stolt, M. Holt, and S. Ryba.  
**Soil respiration rates in coastal marshes subject to increasing watershed nitrogen loads in southern New England, USA**  
*Wetlands*, 29(3): 952-963, 2009. ISSN 0277-5212.  
<http://www.bioone.org/doi/pdf/10.1672/08-147.1>

Wu, W., and C. T. Driscoll.  
**Impact of Climate Change on Three-Dimensional Dynamic Critical Load Functions**  
*Environmental Science & Technology*, 44(2): 720-726, 2010. ISSN 0013-936X.  
<http://dx.doi.org/10.1021/es900890t>

Yang, X. J., V. Wittig, A. K. Jain, and W. Post.  
**Integration of nitrogen cycle dynamics into the Integrated Science Assessment Model for the study of terrestrial ecosystem responses to global change**  
*Global Biogeochemical Cycles*, 23, GB4029, 2009. ISSN 0886-6236.  
<http://dx.doi.org/10.1029/2009GB003474>

Yu, Q., H. Epstein, and D. Walker.  
**Simulating the effects of soil organic nitrogen and grazing on arctic tundra vegetation dynamics on the Yamal Peninsula, Russia**  
*Environmental Research Letters*, 4(4), 045027, 2009. ISSN 1748-9326.  
<http://dx.doi.org/10.1088/1748-9326/4/4/045027>

Zhao, Y. J., H. Qing, C. J. Zhao, C. F. Zhou, W. G. Zhang, Y. Xiao, and S. Q. An.  
**Phenotypic plasticity of *Spartina alterniflora* and *Phragmites australis* in response to nitrogen addition and intraspecific competition**  
*Hydrobiologia*, 637(1): 143-155, 2010. ISSN 0018-8158.  
<http://dx.doi.org/10.1007/s10750-009-9992-5>

Zhou, Z. X., X. H. Zheng, B. H. Xie, S. H. Han, and C. Y. Liu.  
**A process-based model of N<sub>2</sub>O emission from a rice-winter wheat rotation agro-ecosystem: Structure, validation and sensitivity**  
*Advances In Atmospheric Sciences*, 27(1): 137-150, 2010. ISSN 0256-1530.  
<http://dx.doi.org/10.1007/s00376-009-8191-7>

## Web Pages

**Jill Baron, USGS Ecosystem Dynamics, Research Ecologist, staff profile**

<http://www.fort.usgs.gov/staff/staffprofile.asp?StaffID=99>

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